

REMARKS

The paper copy of the Sequence Listing submitted with the application as filed contained alphabetical headings following the numeric identifiers at each entry. The alphabetical headings have been removed in the substitute paper copy of the Sequence Listing. The substitute paper copy and the original paper copy are otherwise identical.

I believe the content of the substitute paper copy of the Sequence Listing is identical to that of the computer-readable copy of the Sequence Listing submitted with the application as filed. The substitute Sequence Listing does not include new matter.

Respectfully submitted,

Date:

By: Michelle Holmes-Son  
Michelle L. Holmes-Son  
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Banner & Witcoff, Ltd.  
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202-508-9100

09/03/2007 10:13:01

Query: LipoxinA4-like GPCR  
 Sbjct: sp|P79177|FML1\_GORGO FMLP-RELATED RECEPTOR I (FMLP-R-I) >gi|1731979|emb|CAA66322|  
 (X97738) low affinity N-formyl peptide receptor [Gorilla  
 gorilla]  
 Length = 348

Expect = 3e-26  
 Identities = 90/324 (27%), Positives = 157/324 (47%), Gaps = 33/324 (10%)

Query: 18 DEDSYPOGGWDTVELVALLLGLP-----ANGLMAWLAGSOARHGAGTRIALLLLSLAL 71  
 +E SY G+ + ++ L+LG+ NGL+ W+AG + T + L+LAL  
 Sbjct: 10 EEVSYESAGYTVLRILPLVVLGTVFVLGVLNGLVIWVAGFRMTRVTI---ICYNLAL 66

Query: 72 SDFLFLAAAAFQILEIRHGGHWPLGTAACRFYFLWGVSYSSGLFLLAALSIDRCILALC 131  
 +DF F A F I+ + G WP G C+ + + ++ +FL+ ++LDRG+ L  
 Sbjct: 67 ADFSFTATLPFLIVSMAMGEKWPFGWFLCKLIHIVVDINLFGSVFLIGFIALDRICVLH 126

Query: 132 PHWYPGHRPVRPLPLWVCAGVWVLTATLFSVP-WLVFPEAAVWVYDLVICLDF--W-----D 183  
 P W HR V L + V G W+LA + ++P +L + D +F W +  
 Sbjct: 127 PWAQHRTVSLAMKIVIGPWLIALVLTLPVFLFTVTIPIPGDTYCTENFASWGGTPEE 186

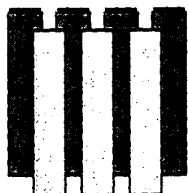
Query: 184 SEELSLRML-----VLGGFLPFLLLVCHVLTQATACRTCHRRQQPAACRGFARVAR 236  
 +++++ ML V+G LP ++ +C+ L A H++ + R RV  
 Sbjct: 187 RQKVAITMLTARGIIRFVIGFSLPMSIVAICYGLIAA---KHKKGMIKSSRPL-RVLT 241

Query: 237 TILSAYVVRPLPYQLAQLLYLAFLWDV--YSGYLWEALVY-SDYLILNSCLSPFLCLM 293  
 +++++ + P+QL LL +L ++ Y Y + + LV + L NSCL+P L +  
 Sbjct: 242 AWWASFFICWFPQLVALLGTVMKEMLFYGYKIIDILVNPTSSLAFTNSCLNPMLYVF 301

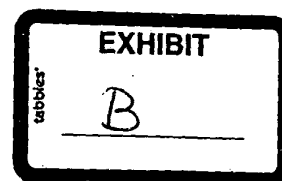
Query: 294 ASADLR-TLLRSVLSSFAALCEE 316  
 D R L+ S+ +S AL E+  
 Sbjct: 302 VGQDFRRLIHSLSLTSLEALSED 325



## GPCRDB Fmet-leu-phe



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## Viseur snake-like plots for this family

- FML1\_GORGO : FPRL1 -- FMLP-related receptor I (FMLP-R-I) (Fragment).
- FML1\_HUMAN : FPRL1 -- FMLP-related receptor I (FMLP-R-I) (Lipoxin A4 receptor) (LXA4 receptor) (RFP) (HM63).
- FML1\_MACMU : FPRL1 -- FMLP-related receptor I (FMLP-R-I) (Fragment).
- FML1\_MOUSE : FPRL1 -- FMLP-related receptor I (FMLP-R-I) (Lipoxin A4 receptor) (LXA4 receptor).
- FML1\_PANTR : FPRL1 -- FMLP-related receptor I (FMLP-R-I) (Fragment).
- FML1\_PONPY : FPRL1 -- FMLP-related receptor I (FMLP-R-I) (Fragment).
- FML2\_HUMAN : FPRL2 -- FMLP-related receptor II (FMLP-R-II).
- FMLR\_GORGO : FPR1 -- fMet-Leu-Phe receptor (fMLP receptor) (N-formyl peptide receptor) (FPR) (N-formylpeptide chemoattractant receptor) (Fragment).
- FMLR\_HUMAN : FPR1 -- fMet-Leu-Phe receptor (fMLP receptor) (N-formyl peptide receptor) (FPR) (N-formylpeptide chemoattractant receptor).
- FMLR\_MACMU : FPR1 -- fMet-Leu-Phe receptor (fMLP receptor) (N-formyl peptide receptor) (FPR) (N-formylpeptide chemoattractant receptor) (Fragment).
- FMLR\_MOUSE : FPR1 -- fMet-Leu-Phe receptor (fMLP receptor) (N-formyl peptide receptor) (FPR) (N-formylpeptide chemoattractant receptor).
- FMLR\_PANTR : FPR1 -- fMet-Leu-Phe receptor (fMLP receptor) (N-formyl peptide receptor) (FPR) (N-formylpeptide chemoattractant receptor) (Fragment).
- FMLR\_PONPY : FPR1 -- fMet-Leu-Phe receptor (fMLP receptor) (N-formyl peptide receptor) (FPR) (N-formylpeptide chemoattractant receptor) (Fragment).
- FMLR\_RABIT : FPR1 -- fMet-Leu-Phe receptor (fMLP receptor) (N-formyl peptide receptor) (FPR) (N-formylpeptide chemoattractant receptor).
- O88535 : FPR-RS1-- N-formylpeptide receptor-like 1.
- O88536 : FPR-RS2-- N-formylpeptide receptor-like 2 (Lipoxin A4 receptor-like protein).
- O88537 : FPR-RS3-- N-formylpeptide receptor-like 3.
- O88538 : FPR-RS4-- N-formylpeptide receptor-like 4.





1: J Immunol. 2002 Sep 15;169(6):3363-9.

Identification, cloning, and functional characterization of a murine lipoxin A4 receptor homologue gene.

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To identify additional members of the murine N-formyl-Met-Leu-Phe peptide receptor family (fMLF-R), a mouse macrophage cDNA library was screened using the open reading frame of murine N-formyl peptide receptor. Four individual hybridizing cDNA clones were maintained through tertiary screening. One cDNA clone was a truncated, polyadenylated version of the previously described murine-fMLF-R. The other three cDNA clones varied in length, but contained identical open reading frame sequences. One clone, 8C10, was selected for further study and shared 70% sequence identity with murine-fMLF-R and 89% sequence identity with murine lipoxin A4 receptor cDNA. When placed into the pcDNA-3 expression vector and cotransfected with Galpha16 cDNA into COS-1 cells, 8C10 cDNA induced the production of inositol-1,4,5-triphosphate when concentrations of 1-1600 nM lipoxin A4 (LXA4) were tested as ligands. Northern blot analysis of murine organs indicated that the 8C10 message is present in lung, spleen, and adipose tissue. Moreover, mice treated with LPS demonstrated increased expression of 8C10 message in spleen and adipose tissue, while showing a slight reduction in lung. We have also characterized the 8C10 structural gene from a 129Sv/J genomic library and have determined its size to be >6.1 kb in length and comprised of two exons separated by a 4.8-kb intron. Collectively, these data indicate that this homologue receptor is closely related to the murine LXA4 receptor and functionally responds to LXA4 as a ligand.

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